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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/590,260	08/18/2006	John A. Johansen	FMCE-P145	6093

7590 11/24/2010

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EXAMINER	
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ART UNIT	PAPER NUMBER
2181	

MAIL DATE	DELIVERY MODE
11/24/2010	PAPER

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BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

Application Number: 10/590,260
Filing Date: August 18, 2006
Appellant(s): JOHANSEN ET AL.

Henry C. Query, Jr.
For Appellant

EXAMINER'S ANSWER

This is in response to the appeal brief filed 10/04/2010 appealing from the Office action mailed 12/16/2009.

(1) Real Party in Interest

The examiner has no comment on the statement, or lack of statement, identifying by name the real party in interest in the brief.

(2) Related Appeals and Interferences

The examiner is not aware of any related appeals, interferences, or judicial proceedings which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

(3) Status of Claims

The following is a list of claims that are rejected and pending in the application:

In the present application claims 16, 17 and 19 are pending, claims 1-15, 18 and 20-22 having previously been canceled. Claims 16, 17 and 19 have been finally rejected.

(4) Status of Amendments After Final

The examiner has no comment on the appellant's statement of the status of amendments after final rejection contained in the brief.

(5) Summary of Claimed Subject Matter

The examiner has no comment on the summary of claimed subject matter contained in the brief.

(6) Grounds of Rejection to be Reviewed on Appeal

The examiner has no comment on the appellant's statement of the grounds of rejection to be reviewed on appeal. Every ground of rejection set forth in the Office action from which the appeal is taken (as modified by any advisory actions) is being

maintained by the examiner except for the grounds of rejection (if any) listed under the subheading "WITHDRAWN REJECTIONS." New grounds of rejection (if any) are provided under the subheading "NEW GROUNDS OF REJECTION."

(7) Claims Appendix

The examiner has no comment on the copy of the appealed claims contained in the Appendix to the appellant's brief.

(8) Evidence Relied Upon

Applicant's Admitted Prior Art	Specification, page 1, lines 8-33	
US Patent 5,469,150	Sitte	11-1995
US Patent 6,006,338	Longsdorf et al.	12-1999
US Patent 7,349,479	Suganuma et al.	03-2008

(9) Grounds of Rejection

The following ground(s) of rejection are applicable to the appealed claims:

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 16-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Applicant's Admitted Prior Art (AAPA) in view of Sitte (US Patent 5,469,150), Suganuma et al. (US Patent 7,349,479).

As per claim 16, AAPA teaches a control system for a subsea installation, the control system comprising:

a control module (Specification, p. 1, ll. 8-33); and

a plurality of devices (e.g. sensors, actuators) which are connected to the control module (Specification, p. 1, ll. 8-33).

AAPA does not teach the control system comprising: a common bus … the plurality of devices are each removably connectable to the common bus …a bus controller having a unique address … comprises a junction and a plurality of branch cables … at least two control supply cables … .

Sitte teaches a control system comprising:

a common bus (Fig. 1, ref. 10 and Fig. 11, ref. 770, 772, 780, 782) which is connected to a control module (e.g. programmable control logic (PLC) 12 of Fig. 1) and which comprises at least one cable unit (e.g. cable unit between the T-connectors), (Fig. 1; col. 7, l. 8 to col. 8, l. 51 and col. 15, l. 18 to col. 17, l. 49); and

a plurality of devices (Fig. 1, ref. 14, 16, 18-19, 21-22, 26-27, 29-30, 34) which are each removably connectable (e.g. via replacement or addition) to the cable unit (col. 7, l. 8 to col. 8, l. 51 and col. 15, l. 18 to col. 17, l. 49);

wherein each one of the devices comprises a bus controller having a unique address (e.g. identification bits) (Fig. 5-8, ref. 220-230; Fig. 11, ref. 220-230; col. 4, ll. 63-66; col. 11, l. 46 to col. 13, l. 22 and col. 15, l. 18 to col. 17, l. 49);

wherein the control module (Fig. 1, ref. 12) comprises means for communicating with each one of the devices over the common bus (Fig. 5-8, ref. 220-230; Fig. 11, ref.

220-230; col. 7, l. 8 to col. 8, l. 51; col. 9, ll. 39-64; col. 13, ll. 17-22 and col. 15, l. 18 to col. 17, l. 49), as the programmable control logic communicate via forwarding commands to the devices or receiving data from the devices; and

wherein the cable unit comprises a junction (Fig. 1, ref. 20), and a plurality of branch cables (e.g. branch cables connected to the corresponding devices 22, 26, 30, 34 of Fig. 1), each of the plurality of branch cables comprising a first end which is connected to the junction (e.g. the end of the branch cable connecting to the junction 20 of Fig. 1), and a second end which is connected to a corresponding electrical connector (e.g. the end of the branch cable that is connected to the device 22, 26, 30, 34 of Fig. 1) that in turn is removably connected (e.g. via replacement or addition) to one of the devices (Fig. 1, ref. 22, 26, 30, 34), wherein at least two control signal supply cables which each extend between said first and second ends and are connected to said junction and said corresponding electrical connector (e.g. at least two devices 22, 26, 30, 34 of Fig. 1 are connected to the junction 20 of Fig. 1 via the correspond electrical connector and one of the control signal supply cable, as the devices have the corresponding cable attached similar to that of cable 740 of Fig. 11 for supplying the control signal) (Fig. 1; Fig. 11; col. 4, ll. 39-45; col. 7, l. 8 to col. 8, l. 51 and col. 15, l. 18 to col. 17, l. 49), wherein during the interview dated 12/10/2009 it was agreed upon that the device having the bus controller and connected to the junction is to allow the control module to identify the device, which is functionally equivalent to Sitte's devices (Sitte, Fig. 1, ref. 22, 26, 30 and 34) that are connected to Sitte's junction (Sitte, Fig. 1, ref. 20 and Fig. 11) having the bus controller (Sitte, Fig. 11, ref. 220-230), as Sitte's devices

(Sitte, Fig. 1, ref. 22, 26, 30 and 34) are identified by the control module (Sitte, Fig. 1, ref. 12) via the junction's (Sitte, Fig. 1, ref. 20 and Fig. 11) bus controller (Sitte, Fig. 11, ref. 220-230) for proper communication between the control module and the devices connected to the junction.

It would have been obvious for one of ordinary skill in this art, at the time of invention was made to include Sitte's control system configuration into AAPA's subsea installation for the benefit of utilizing the Controller Area Network (CAN) protocol which permits efficient communication between individual devices including sensors and actuators at a faster data rate in a high security environment (Sitte, col. 2, l. 59 to col. 3, l. 5 and col. 4, ll. 1-38) to obtain the invention as specified in claim 16.

AAPA and Sitte do not teach the control system comprising: wherein each of the branch cables comprises said at least two control signal supply cables that are directly electrically connected to each other at said corresponding electrical connector.

Suganuma teaches a CAN system comprising wherein each branch cables comprises said at least two control signal supply cables that are directly electrically connected to each other at said corresponding electrical connector (Fig. 1; Fig. 7 and col. 1, l. 23 and col. 2, l. 42), by combining the branch cables in parallel interconnection configuration to the devices into AAPA and Sitte's control signal supply cables, the resulting combination teaches the control signal supply cable for one of the devices is directly connected to the control signal supply cable for another one of the devices in parallel, which have the equivalent electrical interconnection configuration as each of

the branch cables having the at least two control signal supply cables that are connected at the corresponding electrical connector.

It would have been obvious for one of ordinary skill in this art, at the time of invention was made to include Suganuma's parallel interconnection with corresponding electrical termination into AAPA and Sitte's CAN system, not only because it is a requirement for the CAN system's communication bus to be properly terminated at the end, but also for the benefit of having an enhanced fail-safe performance for a break failure of the two-wire communications line (Suganuma, col. 2, ll. 60-65) to obtain the invention as specified in claim 16.

As per claim 17, AAPA, Sitte and Suganuma teach all the limitations of claim 16 as discussed above, where Sitte and Suganuma further teach the control system comprising wherein each of said branch cables further comprise at least two control signal return cables which extend between said first and second ends and are connected to said junction and said corresponding electrical connector (Sitte, Fig. 1; Fig. 11; col. 4, ll. 39-45; col. 7, l. 8 to col. 8, l. 51; col. 15, l. 18 to col. 17, l. 49 and Suganuma, Fig. 1; Fig. 7 and col. 1, l. 23; col. 2, l. 42), having similar parallel interconnection configuration as the control signal supply cables.

Claim 19 is rejected under 35 U.S.C. 103(a) as being unpatentable over AAPA in view of Sitte (US Patent 5,469,150) and Longsdorf et al. (US Patent 6,006,338).

AAPA teaches a control system for a subsea installation, the control system comprising:

a control module (Specification, p. 1, ll. 8-33); and

a plurality of devices (e.g. sensors, actuators) which are connected to the control module (Specification, p. 1, ll. 8-33).

AAPA does not teach the control system comprising: a common bus … the plurality of devices are each removably connectable to the common bus …a bus controller having a unique address … a junction and a plurality of branch cables … at least two control signal cables … a current loop ….

Sitte teaches a control system comprising:

a common bus (Fig. 1, ref. 10 and Fig. 11, ref. 770, 772, 780, 782) which is connected to a control module (e.g. programmable control logic (PLC) 12 of Fig. 1) and which comprises at least one cable unit (e.g. cable unit between the T-connectors), (Fig. 1; col. 7, l. 8 to col. 8, l. 51 and col. 15, l. 18 to col. 17, l. 49); and

a plurality of devices (Fig. 1, ref. 14, 16, 18-19, 21-22, 26-27, 29-30, 34) which are each removably connectable (e.g. via replacement or addition) to the cable unit (col. 7, l. 8 to col. 8, l. 51 and col. 15, l. 18 to col. 17, l. 49);

wherein each one of the devices comprises a bus controller having a unique address (e.g. identification bits) (Fig. 5-8, ref. 220-230; col. 4, ll. 63-66; col. 11, l. 46 to col. 13, l. 22 and col. 15, l. 18 to col. 17, l. 49);

wherein the control module (Fig. 1, ref. 12) comprises means for communicating with each one of the devices over the common bus (Fig. 5-8, ref. 220-230; Fig. 11, ref.

220-230; col. 7, l. 8 to col. 8, l. 51; col. 9, ll. 39-64; col. 13, ll. 17-22 and col. 15, l. 18 to col. 17, l. 49), as the programmable control logic communicate via forwarding commands to the devices or receiving data from the devices; and

wherein the cable unit comprises a junction (Fig. 1, ref. 20), and a plurality of branch cables (e.g. branch cables connected to the corresponding devices 22, 26, 30, 34 of Fig. 1), each of the plurality of branch cables comprising a first end which is connected to the junction (e.g. the end of the branch cable connecting to the junction 20 of Fig. 1), a second end which is connected to a corresponding electrical connector (e.g. the end of the branch cable that is connected to the device 22, 26, 30, 34 of Fig. 1) that in turn is removably connected (e.g. via replacement or addition) to one of the devices (Fig. 1, ref. 22, 26, 30, 34), and at least two control signal cables which each extend between said first and second ends and are connected to said junction and said corresponding electrical connector (e.g. wherein the devices 22, 26, 30, 34 of Fig. 1 are connected to the junction 20 of Fig. 1 via the correspond electrical connector and the corresponding control signal cables 746-747 of Fig. 11, as the devices have the corresponding cable attached similar to that of cable 740 of Fig. 11) (Fig. 1; Fig. 11; col. 4, ll. 39-45; col. 7, l. 8 to col. 8, l. 51 and col. 15, l. 18 to col. 17, l. 49), wherein during the interview dated 12/10/2009 it was agreed upon that the device having the bus controller and connected to the junction is to allow the control module to identify the device, which is functionally equivalent to Sitte's devices (Sitte, Fig. 1, ref. 22, 26, 30 and 34) that are connected to Sitte's junction (Sitte, Fig. 1, ref. 20 and Fig. 11) having the bus controller (Sitte, Fig. 11, ref. 220-230), as Sitte's devices (Sitte, Fig. 1, ref. 22,

26, 30 and 34) are identified by the control module (Sitte, Fig. 1, ref. 12) via the junction's (Sitte, Fig. 1, ref. 20 and Fig. 11) bus controller (Sitte, Fig. 11, ref. 220-230) for proper communication between the control module and the devices connected to the junction.

It would have been obvious for one of ordinary skill in this art, at the time of invention was made to include Sitte's control system configuration into AAPA's subsea installation for the benefit of utilizing the Controller Area Network (CAN) protocol which permits efficient communication between individual devices including sensors and actuators at a faster data rate in a high security environment (Sitte, col. 2, l. 59 to col. 3, l. 5 and col. 4, ll. 1-38) to obtain the invention as specified in claim 19.

AAPA and Sitte do not teach the control system comprising: wherein each of said control signal cables comprises a current loop which is routed through said corresponding electrical connector and said junction.

Longsdorf teaches a control system comprising wherein each of said control signal cables comprises a current loop (e.g. loop current) which is routed through said corresponding electrical connector and said junction (Fig. 1-2; col. 3, l. 29 to col. 4, l. 50 and col. 5, ll. 24-30), by combining the loop current with AAPA and Sitte's control signal cables configuration, the loop current is then routed through each AAPA and Sitte's corresponding electrical connector and junction.

It would have been obvious for one of ordinary skill in this art, at the time of invention was made to include Longsdorf's loop current into AAPA and Sitte's subsea

installation for the well known benefit that current loop provides accurate signaling and able to supply power to the devices, as well as for the benefit of having a self diagnostic and set-up process transmitter that is able to communicate when there is inadequate power on the process link (Longsdorf, col. 2, ll. 29-36) to obtain the invention as specified in claim 19.

(10) Response to Argument

Core Issue:

Appellant is arguing in a plurality of arguments that the resulting combination of the references does not teach/suggest appellant's invention.

Examiner's response to Core Issue:

The examiner respectfully disagrees, and based on the interviews dated 12/10/2009 and 12/11/2009:

> "…During the interview dated 12/10/2009, the examiner request the attorney to clarify the core novelty of the instant invention, wherein the attorney explained that the core novelty of the instant application is the combination of the claimed limitations currently recited in the independent claims; furthermore, the attorney clarified that the bus controller having the unique address is to allow the control module to identify each of the devices.
> During the interview dated 12/11/2009, the examiners requested the attorney to further distinguish the core novelty of the instant invention from Sitte (US Patent 5,469,150), wherein the attorney explained that Sitte's smart device differ from the instant invention's smart device, as Sitte's smart device is unable to be recognized by the control module. During the interview, it was also agreed upon that the overall inventive concept is to have a cable and a harness with connectors, wherein the connectors are able to receive devices with processor that can be recognized by the control module …,"

it is the examiner's best understanding that the overall inventive concept of appellant's invention is "…to have a cable and a harness with connectors, wherein the connectors are able to receive devices with processor that can be

recognized by the control module …;" and the examiner is relying on the Sitte as following for the teaching of appellant's invention:

Sitte does teach appellant's core inventive concept corresponding to a cable (Fig. 1, ref. 10) and a harness with connectors, wherein the connectors are able to receive devices (Fig. 1, ref. 14, 16, 18, 21) with processor (Fig. 5-8, ref. 220, 230) that can be recognized by the control module (Fig. 1, ref. 12) (Fig. 1; col. 4, ll. 63-66; col. 11, l. 46 to col. 13, l. 22 and col. 15, l. 18 to col. 17, l. 49)

Issue A1 (i): The 35 U.S.C. § 103 Rejections of claim 16.

Appellant is arguing (on pages 5-8) that the rejection is improper, because contrary to the examiner's assertion, Sitte clearly does not disclose a plurality of devices which are each connectable to a cable unit having a junction and which each comprise a bus controller having a unique address as examiner's assertion that Sitte's "junction" is the element 20 shown in Figure 1 and that the "plurality of devices" are the elements 14, 16, 18, 19, 21, 22, 26, 27, 29, 30 and 34 shown in Figure 1, and that each one of these devices comprises a bus controller having a unique address is incorrect; more specifically, although element 20 may arguably be considered a junction, none of the devices 22, 26, 30 and 34 which are shown connected to element 20 comprises a bus controller having a unique address, as devices 22, 26, 30 and 34 are not smart devices, but rather these devices are "standard devices which do not have the capability of formulating and transmitting messages" (column 7, lines 29-31) (i.e. devices 22, 26, 30 and 34

"do not have the capability of formulating, transmitting or receiving data packets" (column 7, lines 43-45)); and to be sure, Sitte teaches that the "junction" 20 is what enables the devices 22, 26, 30 and 34 to communicate with the PLC 12, as the junction 20 is an "intelligent multiple port interconnect system" which takes the signals from the devices 22, 26, 30, 34 and formulates a data packet for transmission on the communication bus to the PLC 12 (column 7, lines 57-61); in summary, although Sitte discloses a cable unit which may be considered to comprise a junction 20, the devices 22, 26, 30, 34 which are connected to the junction do not comprise a bus controller having a unique address, only the smart devices 14, 16, 18, 19, 21, 27 and 29 appear to include a bus controller, but these devices are not connected to the junction 20.

Examiner's response to Issue A1 (i):

The examiner respectfully disagrees, and as discussed in detail above, Sitte does teach appellant's overall inventive concept; therefore, the combination of the references would suggest appellant's claimed invention.

Furthermore, Sitte does teach/suggest appellant's claimed feature corresponding to "… a plurality of devices which are each connectable to a cable unit having a junction and which each comprise a bus controller having a unique address …" because Sitte's disclosure is functionally equivalent to appellant's claimed feature; more specifically, as explained to the examiner by the appellant during the interviews dated 12/10/2009 and 12/11/2009:

"…During the interview dated 12/10/2009, the examiner request the attorney to clarify the core novelty of the instant invention, wherein the attorney

explained that the core novelty of the instant application is the combination of the claimed limitations currently recited in the independent claims; furthermore, the attorney clarified that the bus controller having the unique address is to allow the control module to identify each of the devices.

During the interview dated 12/11/2009, the examiners requested the attorney to further distinguish the core novelty of the instant invention from Sitte (US Patent 5,469,150), wherein the attorney explained that Sitte's smart device differ from the instant invention's smart device, as Sitte's smart device is unable to be recognized by the control module. During the interview, it was also agreed upon that the overall inventive concept is to have a cable and a harness with connectors, wherein the connectors are able to receive devices with processor that can be recognized by the control module …,"

appellant's claimed feature corresponding to "… a plurality of devices which are each connectable to a cable unit … each comprise a bus controller having a unique address …" is to allow the control module to identify each of the devices; and based on the appellant's above understanding/explanation of Sitte,

- Sitte teaches that the "junction" 20 is what enables the devices 22, 26, 30 and 34 to communicate with the PLC 12, as the junction 20 is an "intelligent multiple port interconnect system" which takes the signals from the devices 22, 26, 30, 34 and formulates a data packet for transmission on the communication bus to the PLC 12 (column 7, lines 57-61); and
- Sitte discloses a cable unit which may be considered to comprise a junction 20, and the devices 22, 26, 30, 34 which are connected to the junction;

therefore, each of Sitte's devices (e.g. devices 22, 26, 30, 34) which are connected to the junction (e.g. element 20 shown in Figure 1) need to be identified to Sitte's PLC (e.g. control module) in order for proper communication

between the devices and the PLC, because if the PLC does not know what device the PLC is communicating with, the PLC would not be able to decipher what type of data/message the PLC is receiving or how to communication with the connected device (Sitte, col. 7, l. 8 to col. 8, l. 1). In summary, Sitte does teach/suggest appellant's above claimed feature as Sitte's disclosure (e.g. the devices which are connected to the junction are identified by the control module in order for communication to take place) is functionally equivalent to appellant's claimed feature.

Additionally, it is the examiner's best understanding that appellant's above claimed feature is operating in accordance to Controller Area Network (CAN) protocol (Specification, page 8, lines. 16-20 and page 9, lines 6-12), and since Sitte's system is also operating in accordance to Controller Area Network (CAN) protocol (e.g. communicating via CAN protocol chip) (Sitte, col. 13, ll. 17-22), the operation of Sitte's system is functionally equivalent to the operation of appellant's above claimed feature, as both are utilizing the same Controller Area Network (CAN) protocol

Issue A1 (ii): The 35 U.S.C. § 103 Rejections of claim 16.

Appellant is arguing (on pages 5-8) that the rejection is improper, because contrary to the examiner's assertion, Sitte clearly does not disclose a cable unit having a plurality of branch cables which are each connected between the junction and a corresponding electrical connector that in turn is removably

connectable to one of the devices as Sitte does not disclose that each "branch cable" which is used to connect a corresponding device 22, 26, 30, 34 to the junction 20 includes a second end which is connected to a corresponding electrical connector that in turn is removably connectable to the device, as Sitte simply does not disclose how the devices 22, 26, 30, 34 are connected to their corresponding cables; although the examiner asserts that the devices are connected to their corresponding cables in a manner similar how device 700 is connected to cable 740 in Figure 11, this cannot be correct, because in contrast to devices 22, 26, 30 and 34, device 700 is a "smart" device; therefore, Figure 11 does not show how the devices 22, 26, 30 and 34 are connected to their corresponding cables.

Examiner's response to Issue A1 (ii):

The examiner respectfully disagrees, and as discussed in detail above, Sitte does teach appellant's overall inventive concept; therefore, the combination of the references would suggest appellant's claimed invention.

Furthermore, Sitte does suggest that the cable unit is removably connectable because Sitte does disclose that the devices are removable replaced or added (col. 17, ll. 24-33).

Additionally, as discussed in detail above, since appellant's inventive architecture (Specification, page 8, lines. 16-20 and page 9, lines 6-12) and Sitte's system both operate in accordance to Controller Area Network (CAN) protocol; the operation of the two architectures is functionally equivalent.

Issue A1 (iii): The 35 U.S.C. § 103 Rejections of claim 16.

Appellant is arguing (on pages 5-8) that the rejection is improper, because contrary to the examiner's assertion, Sitte clearly does not disclose a cable unit having a plurality of branch cables which each include at least two control signal cables as Sitte does not disclose that each "branch cable" which is used to connect a device 22, 26, 30, 34 to the junction 20 comprises at least two control signal supply cables, as is required by claim 16, and Sitte does not disclose what is inside the cables connecting the devices 22, 26, 30, 34 to the junction 20; however, contrary to the examiner's assertion, these cables are not similar to the cable 740 shown in Figure 11, and as discussed above, the cable 740 is only used to connect a smart device to the common bus 10, and to be sure, if the devices 22, 26, 30, 34 were to include two signal wires and two power wires, as does the cable 740, one would presume that the junction 20 would not be necessary.

Examiner's response to Issue A1 (iii):

The examiner respectfully disagrees, and as discussed in detail above, Sitte does teach appellant's overall inventive concept; therefore, the combination of the references would suggest appellant's claimed invention.

Furthermore, in Sitte's Figure 1, the devices 22 and 26 are proximity switches and devices 30 and 34 are photoelectric devices, wherein these devices are connected to the intelligent multiple port interconnection system (e.g.

junction) (Fig. 1, ref. 20) for communicating with the main controller (Fig. 1, ref. 12) (e.g. the devices communicate with the main controller via the junction) (col. 7, l. 8 to col. 8, l. 1); and in Figure 11, the device that can be connected to the junction (Fig. 11, ref. 220-230, 704, 710, 712, 714, 730) includes photoelectric device (e.g. Fig. 1, ref. 30, 34) and virtually any other types of sensing element that can provide a signal representing a particular characteristic of the environment surrounding the sensor (e.g. Fig. 1, ref. 22, 26), wherein the device communicates with the main controller (Fig. 1, ref. 12) via the junction (Fig. 11, ref. 220-230, 704, 710, 712, 714, 730) (Sitte, col. 15, l. 18 to col. 17, l. 49); therefore, Sitte's Figure 11 architecture is relevant to Sitte's devices 22, 26, 30 and 34, because Sitte's Figure 11 shows how these devices (Fig. 1, ref. 22, 26, 30 and 34) are coupled to the junction (Fig. 1, ref. 20) for communication with the main controller (Fig. 1, ref. 12).

Since Sitte's Figure 11 does disclose the cable (Fig. 11, ref. 740) utilized in the CAN protocol and appellant's above arguments also agrees that Sitte's CAN protocol cable does include the two signal wires (Sitte, Fig. 11, ref. 740, 747) (e.g. two control supply cable); therefore, the Sitte's devices that are connected to the Controller Area Network (CAN), via the junction, needs to conform to the CAN protocol by utilizing CAN protocol cable having the two signal wires (e.g. two control supply cable); additionally, Sitte's teaching would suggest the "branch cable" have the two control supply cable because both Sitte's and appellant's network architectures conform to Control Area Network as

discussed in detail above; and therefore, the cables utilized in both network architecture would be similar in order to conform to the same CAN protocol; finally, it is the examiner's best understanding, based on the interview dated 12/10/2009 to 12/11/2009, that the "branch cable" having the "two control supply cable" is to allow the control module to identify the connected device and communicate/control the connected device; and as discussed in detail above, Sitte does disclose the control module identifying the connected device and communicating/controlling the connected device; therefore, Sitte's teaching is functionally equivalent to the claimed feature corresponding to the "branch cable" having the "two control supply cable."

Issue A2 : The 35 U.S.C. § 103 Rejections of claim 17.

Appellant is arguing (on page 8) that, as discussed above, the cables which Sitte uses to connect the devices 22, 26, 30 and 34 to the junction 20 do not include neither two control signal supply cables nor two control signal return cables.

Examiner's response to Issue A2:

The examiner respectfully disagrees, and as discussed in detail above, Sitte does teach appellant's overall inventive concept; therefore, the combination of the references would suggest appellant's claimed invention. And, as appellant appears to be applying the above argument (i.e. **Issue A1 (iii)**) for claim 16

toward claim 17, the examiner will also apply the above response towards claim 17.

Furthermore, Sitte's teaching would suggest the "branch cable" have the two control return cable because both Sitte's and appellant's network architectures conform to Control Area Network as discussed in detail above; and therefore, the cables utilized in both network architecture would be similar in order to conform to the same CAN protocol; additionally, it is the examiner's best understanding, based on the interview dated 12/10/2009 to 12/11/2009, that the "branch cable" having the "two control return cable" is to allow the control module to identify the connected device and communicate/control the connected device; and as discussed in detail above, Sitte does disclose the control module identifying the connected device and communicating/controlling the connected device; therefore, Sitte's teaching is functionally equivalent to the claimed feature corresponding to the "branch cable" having the "two control return cable."

Issue B: The 35 U.S.C. § 103 Rejections of claim 19.

Appellant is arguing (on page 9) that, as discussed above, the examiner's understanding of Sitte is incorrect, and contrary to the examiner's assertion, Sitte does not disclose:

(1) a number of devices which are connected to a junction and which each comprise a bus controller having a unique address;

(2) a plurality of branch cables which each comprise a second end that is connected to a corresponding electrical connector which is removably connectable to one of the devices; and

(3) a plurality of branch cables which each comprise at least two control signal cables connected between the junction and a corresponding electrical connector; moreover, the examiner has failed to show that either AAPA or Longsdorf disclose these features.

Examiner's response to Issue B:

The examiner respectfully disagrees, and appellant's arguments appear to reflect the same arguments as previously presented for claim 16 above; therefore, the examiner will apply the above responses for claim 16 towards appellant's arguments for claim 19.

(11) Related Proceeding(s) Appendix

No decision rendered by a court or the Board is identified by the examiner in the Related Appeals and Interferences section of this examiner's answer.

For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,

/Chun-Kuan Lee/
Patent Examiner
Art Unit 2181

Conferees:

/Alford W. Kindred/
Supervisory Patent Examiner, Art Unit 2181

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